



ATTACHMENT A REMARKS

Considering the matters raised in the Office Action in the same order as raised, and turning first to the claim for priority, applicant respectfully disagrees with the contention that "[c]ontinuation-in-part application 09/435,854, however, does not disclose the limitation of physical control details mounted to a display screen" and the conclusion that "[a]s this limitation appears in all independent claims of the current application, priority is not acknowledged for the copending application 09/435,854." Although the point is believed to be moot in view of the fact that the claims now presented patentably define over the cited references, it is respectfully submitted that the application in question does, in fact, disclose the provision of at least one physical control detail mounted to a display screen (see, e.g., Figure 13 and the description thereof), and applicant reserves the right to contest this withholding of acknowledgement of priority.

Next, the discussion with respect to a proper invention disclosure statement is noted as is the statement that "unless the references have been cited by the examiner on form PO-892, they have not been considered."

Claims 54 and 55 have been objected to because of certain informalities. Claim 55 has been canceled while claim 54 has been amended to correct the informality in question.

Claim 29 has been rejected under 35 USC 112, second paragraph, as being "indefinite." The Examiner has contended that the "metes and bounds of the wording 'irregular' is unclear." Claim 29 has been amended to recite that the screen is of "an irregular, non-standard geometrical shape." This shape is of considerable importance because, inter alia, it permits the largest possible display screen to be packaged into the center stack of the instrument panel, and an irregular shape would be a requirement for many center stack configurations. It is respectfully submitted that the metes and bounds of claim 29 are sufficiently defined by the language now used in the claim.

Regarding the objection to the use of "the vehicle" in line two of claim 45, this claim has been amended to depend from claim 25 as suggested by the Examiner. The suggestion of the Examiner is much appreciated.

Before considering the rejections on prior art, it is noted that claims independent 1, 25 and 54 have been retained in an amended form, while independent claims 47 and 55 have been canceled in order to expedite the prosecution of this particular application. It also noted that all of the remaining independent claims have been amended to refer to a reconfigurable vehicle dash panel. However, applicant reserves the right to file one or more continuing applications based on other applications or aspects of the invention which are not now being claimed.

Turning to the rejections on prior art, because of the amendments that have been made to the claims, the most relevant rejections are now those based on a combination of the Fujimoto and Jaeger '613 patent. In this regard, independent claims 1, 25 and 54 all recite, in one form or the other, that one or more physical control details are located in front of the screen of a reconfigurable instrument panel display for a vehicle and that an electro-optical sensing means is located behind the screen for sensing the position of the physical control detail(s). The claims also recite, in one form or the other, that a computer, which is connected to the electro-optical sensing means, controls at least one function of the vehicle based on the position of the physical control detail (5) sensed by the electro-optical sensing means.

Considering the rejection of claim 1, for example, in rejecting this claim the Examiner argues that Fujimoto discloses the basic invention as claimed but concedes that "Fujimoto does not expressly disclose, a plurality of physical details mounted to said screen, the sensing system sensing the position of the physical details and determining the desired inputs from the sensed control positions." The Examiner then contends that "Jaeger discloses, a plurality of physical details (note the two knobs in figs. 44 and 45) mounted to said screen (316 in fig. 44), the sensing system sensing the position of the physical details (col. 32 lines 32-49) and determining the desired inputs from the sensed control positions (col. 32 lines 12-16 for example)." The Examiner further contends that "Fujimoto and Jaeger are analogous art because they are from the same field of endeavor namely, display peripheral input devices." The Examiner concludes that "[a] the time of the invention it would have been obvious to a person of ordinary skill in the art to include the physical detail and position determining means of Jaeger of the electro-optical system and projector of Fujimoto" and that the "motivation

for doing so would have been to allow the user to determine the most convenient positions for the physical details and allow the user another means of input.”

It is respectfully submitted that the proposed combination would not be obvious given the actual teachings of the references, and that any rejection based on a combination of the Jaeger and Fujimoto patents that would meet the terms of the claims now presented would necessarily be the improper product of hindsight. In this regard, although the Fujimoto reference discloses a rear projection screen, there is no disclosure of physical control details (such as knobs or the like), as conceded by the Examiner. In fact, the Fujimoto patent discloses no way in which to sense such physical control details. Fujimoto senses touch electro-optically but does not sense physical control details or anything like physical control details. Moreover, the electro-optical method disclosed in Fujimoto for sensing soft finger touchings on the touch sensing screen would not be effective in a practical sensing system for sensing physical control details.

The Jaeger '613 patent discloses a system wherein sensing of a control knob is carried out using sensing means located other than behind a display screen. It is important to understand that the provision of electro-optical sensing means located behind a display screen for sensing a physical control detail or details located in front of the screen provides a number of advantages, including lower cost which is, of course, a key issue in the automotive field. Moreover, this approach results in a highly useful instrument panel construction that is readily changed from one vehicle to another in that no wires are needed to connect the controls on the screen to the remainder of the instrument panel.

Moreover, there is no teaching in any of the references of a computer, connected to electro-optical sensing means located behind the screen of a reconfigurable instrument panel for a vehicle, for controlling at least one function of the vehicle based on the physical control detail position or positions sensed by the electro-optical sensing means. It is noted that the Examiner has relied on the Ames patent as “disclosing a CRT touch screen in the center stack of a vehicle” but it is respectfully submitted that the teachings of the Ames patent have very little or nothing to do with the present invention as now claimed in claims 25 and 54. More generally, applicant respectfully

questions the contention that it would be obvious to apply the teachings of Jaeger '613 and Fujimoto to a reconfigurable instrument panel for a vehicle.

Similar remarks apply to the Jaeger '956 reference which basically relates to touch sensing and is of limited relevance at best to claim 25 as now amended.

With respect to the reasoning provided as to why the combination of Fujimoto and Jaeger '614 would be obvious, and regarding the motivation for the combination, "the position determining means" of Jaeger '613 are completely different from the touch sensing means of Fujimoto, and to the extent that the combination that the Examiner is proposing involves simply adding the position sensing means of Jaeger to the Fujimoto system so as to provide position sensing in addition to touch sensing, it is respectfully that the resultant hybrid combination would simply not be that claimed. In this regard, the claims require that it is the electro-optical sensing means located behind the screen that senses the physical control detail or details located in front of the screen, and thus the claims cannot be read on a system which employs a separate position sensing means for this purpose. Moreover, the present invention is not concerned with determining "the most convenient positions for the physical details" and certainly would not with providing "another means of input" since, as pointed out above, it is the rear-located electro-optical sensing means of the claims that senses the position of the one or more physical control details located in front of the screen.

Turning to the dependent claims, these claims are patentable for at least the reasons set forth in support of the independent claims. However, a number of these claims are separately patentable. For example, new claim 56 recites that the apparatus further comprises further means for sensing the location on the screen of a finger touch of a user and for changing at least one of (i) a vehicle function and (ii) information displayed by the display based on the sensed location. Thus, both the physical control detail position and the location of a finger touch are separately sensed. Further, new claim 58 recites that at least a portion of the screen is non-flat. This is in direct contrast with the teachings of the Jaeger reference which specifically focus on the use of a flat panel display. A non-flat screen is crucially important in a vehicle especially when the screen is to be very large (as claimed, for example, in claim 30). A major advantage of the invention is that it permits a screen of the size claimed in claim 30, i.e., larger than

90 square inches. to be employed. In addition, claim 27 recites that the screen is located in the center stack of the instrument panel and occupies a majority of the area of the center stack. While, as indicated above, the Examiner has relied on the Ames patent as disclosing a touch screen device in the center stack of an instrument panel, the screen clearly does not occupy a majority of the area of the center stack. In addition, as discussed above, the recitation in claim 29 that the screen is of an irregular, non-standard geometrical shape is important in connection with providing an aesthetically pleasing look for a large screen packaged into the center stack. Further, claim 32 provides that the display screen is made of plastic. It is noted that this is particularly important in an automobile in that glass screens such as those disclosed by Jaeger are a safety hazard particularly when of a very large size. Other dependent claims are separately patentable for other reasons.

Allowance of the application in its present form is respectfully solicited.

END REMARKS